EHS Services, Inc.

Environmental, Health, Safety, and Quality Management

VIA FAX

March 16, 2004

Mr. Gary Peacock
U.S. Department of the Interior
1849 C Street, NW, Suite 1221
Washington D.C. 20240

Subject: Water Sampling Results: February 2004

Dear Mr. Peacock:

Personnel from EHS Services, Inc. obtained 30 samples of drinking water from 10 locations within the Main and South Interior Buildings between approximately 9:00-11:00 AM on Sunday, February 22, 2004. We analyzed 20 samples for lead content, and 10 samples for bacteria content. The buildings were unoccupied, except for several security personnel, at the time we collected the samples.

Methodology

One of the purposes of this study was to determine whether any bacteria were present in the source water. Therefore, where we were able, we first sprayed a solution consisting of 1 part sodium hypochlorite (in a 5.25% solution) to 10 parts water on the water outflow to neutralize any bacteria present on the outflow piping. In several locations, we did not disinfect the outflow since it was not possible to thoroughly rinse the outflow before obtaining the water sample. Outflows that were disinfected are noted in Table 1.

Next, we collected the water sample to be analyzed for lead content using the "first draw" technique where we captured the water initially coming from the outflow in the sample bottle. Then, we allowed the water to flow for one to two minutes after which time we collected a "second draw" sample. We then thoroughly rinsed the outflow to remove any residual disinfectant solution before obtaining the water sample to be analyzed for bacteria.

Fredericktowne Labs, Inc., located in Myersville, Maryland (Maryland Certification No. 116), analyzed the samples. Hank Frentz collected all samples. His Maryland Certification Number is 0108-00530.

Table 1 presents the analytical results.

Results

There were no exceedances of the Environmental Protection Agency's most restrictive Action Level for lead in drinking water (15 ppb).

The results for the total coliform bacteria analyses show that all results were below the detection limit of one organism per 100 milliliters of water. The Primary Drinking Water Standard for total coliform bacteria is one organism per 100 milliliters of water.

Other bacteria (heterotrophic plate counts-HPC) ranged from less than 0.2 colony-forming units per milliliter of water (CFU/ml) to 6.8 CFU/ml. Two samples, from the ice machine in the cafeteria and the sink in Room 6144, will require re-testing due to a laboratory error. These will be re-sampled on March 21.

The HPC test measures a broad group of bacteria including nonpathogens, pathogens, and opportunistic pathogens. These organisms are ubiquitous in the environment, and are usually the predominant group of bacteria in finished water. High quality supplies meeting coliform standards usually contain less than 500 HPC organisms per milliliter. Five hundred colonies per milliliter has been suggested as an upper level above which corrective action should be taken (American Water Works Association, Water Quality and Treatment, Fourth Edition, 1990). Please note that the HPC action level is not a regulatory mandated limit.

Recommendations

Other than re-testing ice machine in the cafeteria and the sink in Room 6144, we see no need for additional sampling at this time.

Please call me if you have any questions.

Sincerely,

Hank Frentz
Principal

HF/dlm

TABLE 1
RESULTS OF DRINKING WATER ANALYSIS – DEPARTMENT OF INTERIOR
FEBRUARY 22, 2004

LOCATION	LEAD[1] FIRST DRAW	LEAD[1] SECOND DRAW	HPC[2]	TC[3]
Snack Bar Coffee Machine	<0.001	<0.001	<0.2	BDL
Cafeteria Kitchen Prep Sink (Front)*	<0.001	0.002	0.4	BDL
Cafeteria Kitchen Prep Sink (Rear)*	0.002	<0.001	<0.2	BDL
Snack Bar Sink*	0.008	<0.001	0.8	BDL
Cafeteria Ice Machine	<0.001	<0.001	Require re-test[4]	BDL
Cafeteria Coffee Machine	<0.001	<0.001	0.2	BDL
South Building Snack Bar	<0.001	<0.001	<0.2	BDL
Room 1217*	0.001	<0.001	<0.2	BDL
Room 1358*	0.002	<0.001	6.8	BDL
Room 6144*	0.002	0.001	Require re-test[4]	BDL

Key:

* Outflow disinfected: see text
1 Lead concentration in parts per billion (ppb). Detection Limit is 1 ppb. EPA Action Level is 15 ppb.
2 HPC: heterotrophic plate count Detection limit is 0.2 colony forming units.
3 TC: total coliforms Detection limit is one organism per 100 milliliters of water.
4 Re-test scheduled for March 21
BDL Below detection limit